

# Site-specific

## Resident Equation Inputs for Soil

Variable	Value
TR (target cancer risk) unitless	1.0E-6
THQ (target hazard quotient) unitless	1
LT (lifetime - resident) year	70
ET <sub>ress</sub> (exposure time) hour	24
ET <sub>ressc</sub> (child exposure time) hour	24
ET <sub>ressa</sub> (adult exposure time) hour	24
ED <sub>ress</sub> (exposure duration) year	26
ED <sub>ressc</sub> (exposure duration - child) year	6
ED <sub>ressa</sub> (exposure duration - adult) year	20
ED <sub>0-2</sub> (mutagenic exposure duration) year	2
ED <sub>2-6</sub> (mutagenic exposure duration) year	4
ED <sub>6-16</sub> (mutagenic exposure duration) year	10
ED <sub>16-26</sub> (mutagenic exposure duration) year	10
BW <sub>ressc</sub> (body weight - child) kg	15
BW <sub>ressa</sub> (body weight - adult) kg	80
BW <sub>0-2</sub> (mutagenic body weight) kg	15
BW <sub>2-6</sub> (mutagenic body weight) kg	15
BW <sub>6-16</sub> (mutagenic body weight) kg	80
BW <sub>16-26</sub> (mutagenic body weight) kg	80
SA <sub>ressc</sub> (skin surface area - child) cm <sup>2</sup> /day	2373
SA <sub>ressa</sub> (skin surface area - adult) cm <sup>2</sup> /day	6032
SA <sub>0-2</sub> (mutagenic skin surface area) cm <sup>2</sup> /day	2373
SA <sub>2-6</sub> (mutagenic skin surface area) cm <sup>2</sup> /day	2373
SA <sub>6-16</sub> (mutagenic skin surface area) cm <sup>2</sup> /day	6032
SA <sub>16-26</sub> (mutagenic skin surface area) cm <sup>2</sup> /day	6032
EF <sub>ress</sub> (exposure frequency) day/year	350
EF <sub>ressc</sub> (exposure frequency - child) day/year	350
EF <sub>ressa</sub> (exposure frequency - adult) day/year	350
EF <sub>0-2</sub> (mutagenic exposure frequency) day/year	350

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Variable	Value
EF <sub>2-6</sub> (mutagenic exposure frequency) day/year	350
EF <sub>6-16</sub> (mutagenic exposure frequency) day/year	350
EF <sub>16-26</sub> (mutagenic exposure frequency) day/year	350
IFS <sub>ress-adj</sub> (age-adjusted soil ingestion factor) mg/kg	36750
IFSM <sub>ress-adj</sub> (mutagenic age-adjusted soil ingestion factor) mg/kg	166833.33
IRS <sub>ressc</sub> (soil intake rate - child) mg/day	200
IRS <sub>ressa</sub> (soil intake rate - adult) mg/day	100
IRS <sub>0-2</sub> (mutagenic soil intake rate) mg/day	200
IRS <sub>2-6</sub> (mutagenic soil intake rate) mg/day	200
IRS <sub>6-16</sub> (mutagenic soil intake rate) mg/day	100
IRS <sub>16-26</sub> (mutagenic soil intake rate) mg/day	100
AF <sub>ressa</sub> (skin adherence factor - adult) mg/cm <sup>2</sup>	0.07
AF <sub>ressc</sub> (skin adherence factor - child) mg/cm <sup>2</sup>	0.2
AF <sub>0-2</sub> (mutagenic skin adherence factor) mg/cm <sup>2</sup>	0.2
AF <sub>2-6</sub> (mutagenic skin adherence factor) mg/cm <sup>2</sup>	0.2
AF <sub>6-16</sub> (mutagenic skin adherence factor) mg/cm <sup>2</sup>	0.07
AF <sub>16-26</sub> (mutagenic skin adherence factor) mg/cm <sup>2</sup>	0.07
DFS <sub>ress-adj</sub> (age-adjusted soil dermal factor) mg/kg	103390
DFSM <sub>ress-adj</sub> (mutagenic age-adjusted soil dermal factor) mg/kg	428260
City (Climate Zone) PEF Selection	Default
A <sub>ε</sub> (acres)	.5
Q/C <sub>wp</sub> (g/m <sup>2</sup> -s per kg/m <sup>3</sup> )	93.77
PEF (particulate emission factor) m <sup>3</sup> /kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5

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Variable	Value
$U_m$ (mean annual wind speed) m/s	4.69
$U_t$ (equivalent threshold value)	11.32
$F(x)$ (function dependant on $U_m/U_t$ ) unitless	0.194
City (Climate Zone) VF Selection	Default
$A_c$ (acres)	.5
$Q/C_{vol}$ ( $g/m^2$ -s per $kg/m^3$ )	68.18
foc (fraction organic carbon in soil) g/g	0.006
$\rho_b$ (dry soil bulk density) $g/cm^3$	1.5
$\rho_s$ (soil particle density) $g/cm^3$	2.65
$\theta_w$ (water-filled soil porosity) $L_{water}/L_{soil}$	0.15
T (exposure interval) s	819936000
A (VF Dispersion Constant)	11.911
B (VF Dispersion Constant)	18.4385
C (VF Dispersion Constant)	209.7845
City (Climate Zone) VF Selection	Default
$VF_s$ (volitization factor) $m^3/kg$	.
$Q/C_{vol}$ ( $g/m^2$ -s per $kg/m^3$ )	68.18365
$A_c$ (acres)	.5
T (exposure interval) yr	26
$d_s$ (depth of source) m	.
$\rho_b$ (dry soil bulk density) $g/cm^3$	1.5
A (VF Dispersion Constant - Mass Limit)	11.911
B (VF Dispersion Constant - Mass Limit)	18.4385
C (VF Dispersion Constant - Mass Limit)	209.7845

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## Resident Screening Levels (RSL) for Soil

ca=Cancer, nc=Noncancer, ca\* (Where nc SL < 100 x ca SL),  
 ca\*\* (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,  
 Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),  
 Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day) <sup>-1</sup>	SFO Ref	Inhalation Unit Risk (ug/m <sup>3</sup> ) <sup>-1</sup>	IUR Ref	Subchronic RfD (mg/kg-day)	Subchronic RfD Ref	Subchronic RfC (mg/m <sup>3</sup> )	Subchronic RfC Ref	GIABS	ABS	RBA
Test Chemical	NA	No	No	-	-	-	-	2.00E-04	U	-	-	-	-	1

Chemical	Volatilization Factor (m <sup>3</sup> /kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m <sup>3</sup> /kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL Child HQ=1 (mg/kg)	Dermal SL Child HQ=1 (mg/kg)	Inhalation SL Child HQ=1 (mg/kg)
Test Chemical	-	-	1.36E+09	-	-	-	-	1.56E+01	-	-

Chemical	Noncarcinogenic SL Child HI=1 (mg/kg)	Ingestion SL Adult HQ=1 (mg/kg)	Dermal SL Adult HQ=1 (mg/kg)	Inhalation SL Adult HQ=1 (mg/kg)	Noncarcinogenic SL Adult HI=1 (mg/kg)	Screening Level (mg/kg)
Test Chemical	1.56E+01	1.67E+02	-	-	1.67E+02	1.56E+01 nc